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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/799,608

03/15/2004

Norikazu Ota

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03/27/2008

OLIFF & BERRIDGE, PLC

P.O. BOX 320850

ALEXANDRIA, VA 22320-4850

EXAMINER

KAYRISH, MATTHEW

ART UNIT

PAPER NUMBER

2627

MAIL DATE

DELIVERY MODE

03/27/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/799,608

Applicant(s)

OTA ET AL.

Examiner

Matthew G. Kayrish

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,7,8 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,7,8 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/20/2007 has been entered.

Response to Arguments

2. Applicant's arguments filed 12/20/2007 have been fully considered but they are not persuasive.

In regard to applicant's arguments that Sluzewski and Kamijima would not have suggested a head slider comprising the heater and an energizing electrode pad disposed on a first surface of the slider on a side opposite from the conductible support, the examiner respectfully disagrees. Sluzewski discloses a slider that has magnetic transducers that are conductible by way of the conductible support and the arm member, the arm member is bonded to the conductible support and the energizing electrodes are disposed on a first surface of the head slider on a side opposite from the conductible support. Sluzewski fails to specifically disclose a heater element. Kamijima discloses a slider with magnetic transducers and a heater, all of which are conductible by way of the first surface of the head slider. Therefore, it would have been obvious to one of ordinary

skill in the art at the time the invention was made to provide the head slider of Sluzewski with a heater element, as taught by Kamijima, because heaters help to control the amount of thermal expansion in the write head for bringing the pole tips in closer proximity of the surface of the disc. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the heater of the modified head of Sluzewski being conductible by way of the first surface of the slider, because the transducers of Sluzewski are conductible this by way of the first surface making this method the obvious method of choice.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., 5 electrode pads disposed on a single surface of the head slider) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Specifically, Kamijima discloses six electrodes, however, the disclosure of six electrodes still reads on the intended claim language stating "transducer are connect to respective pairs of electrode pads additionally disposed on the first surface." In figure 3 of Kamijima, 3 pair (potentially 4 pair) of electrodes are disposed on the first surface of the slider. Items 31 are for the read and write portions of the transducer and are disposed *in addition* to the heater current electrodes [32, and potentially 35], as stated in paragraph 65.

Claims 1, 3, 4, 7, 8 and 11 have been amended and remain pending. Claims 6, 10 and 12-14 have been canceled.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3, 4, 7, 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sluzewski et al (US Patent Number 6985332), in view of Kamijima (US PG-Pub 2003/0099054).

Regarding claims 1, 4 and 8, Sluzewski discloses:

A hard disk drive (figure 1, item 100) comprising:

A head gimbal assembly (figure 1, item 122) including an arm member (figure 1, item 108) mounted with a head slider (figure 3, item 140); and

A recording medium (figure 1, item 102);

The head slider (figure 3, item 140) comprising:

A conductible support (figure 1, item 124 is conductible via item 130; column 6, lines 46-63) for mounting the head slider to the arm member (figure 1, item 126 is mounted to item 108 via item 124); and

A magnetic head part (figure 3, item 142) bonded to the conductible support (column 6, lines 46-63), the magnetic head part carrying out at least one of recording and reproducing of information (column 6, lines 3-6);

The magnetic head part comprising:

A device to be energized (figure 3, item 128) including first and second poles (column 7, lines 38-52) for supplying a current between the first and second poles (official notice is taken based on column 7, lines 7-22); and

An energizing electrode pad (figure 5, item 148a) disposed on a first surface of the head slider on a side opposite from the conductible support (figure 3, support extends in opposite direction from the first surface);

The first pole of the device to be energized being electrically connected to the energizing electrode pad (column 7, lines 7-22 & 38-52);

The second pole (figure 5, item 148b) of the device to be energized being conductible by way of the conductible support and the arm member (column 7, lines 7-22 & 38-67);

Wherein the first and second poles form a circuit with the device energizing the device (column 7, lines 38-67) when current flows through the device via the first and second poles (column 7, lines 6-37).

Sluzewski fails to specifically disclose:

The device to be energized is a heater element.

Kamijima discloses:

A hard disk drive (figure 1) comprising:

A head gimbal assembly (figure 1, item 17) including an arm member (figure 1, item 14) mounted with a head slider (figure 2, item 21); and

A recording medium (figure 1, item 10);

The head slider (figure 2, item 21) comprising:

A conductible support (figure 2, item 25) for mounting the head slider to the arm member (figure 1, item 17 is mounted to item 14); and

A magnetic head part (figure 2, item 21) bonded to the conductible support (paragraphs 62 & 63), the magnetic head part carrying out at least one of recording and reproducing of information (paragraph 60);

The magnetic head part comprising:

A device to be energized (figure 4, item 45) including first and second poles (figure 3, items 32 & 35) for supplying a current between the first and second poles (official notice is taken based on paragraph 65, which states electrically connected); and

An energizing electrode pad (figure 3, items 32 & 35) disposed on a first surface of the head slider on a side opposite from the conductible support (figures 2 & 3);

The first pole of the device to be energized being electrically connected to the energizing electrode pad (paragraph 65); and

The device to be energized is a heater element (figure 4, item 45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the head element of Sluzewski with a heater element, as taught by Kamijima, because this will cause thermal expansion which brings the head closer to the medium for a stronger recording, as stated in paragraph 67.

Regarding claims 3, 7 and 11, Sluzewski and Kamijima disclose the features of base claims 1, 4 and 8, as stated in the 103 rejection above, and Sluzewski further discloses:

The magnetic head part further comprises:

A magnetoresistive device (figure 3, item 128) for reproducing (column 6, lines 3-6); and

An inductive electromagnetic transducer (figure 3, item 128) for recording (column 6, lines 3-6);

Wherein the magnetoresistive device and the inductive electromagnetic transducer are connected to respective pairs of electrode pads disposed on the first surface (column 7, lines 7-22 & 37-67).

Sluzewski fails to specifically disclose:

Wherein the heater pads, the MR device pads and the electromagnetic transducer pads are all disposed on the first surface.

Kamijima discloses:

Wherein the heater pads, the MR device pads and the electromagnetic transducer pads are all disposed on the first surface (figure 3; paragraph 65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to place the all the electrodes of the head of Sluzewski on the first surface, as taught by Kamijima, because placing all of the electrodes on the first surface opposite to the conductive support is well known in the art.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew G. Kayrish whose telephone number is 571-272-4220. The examiner can normally be reached on 8am - 5pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like

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assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Matthew G. Kayrish

2/15/2008

MGK

**Brian E. Miller /Brian E. Miller/
Primary Patent Examiner AU2627**